

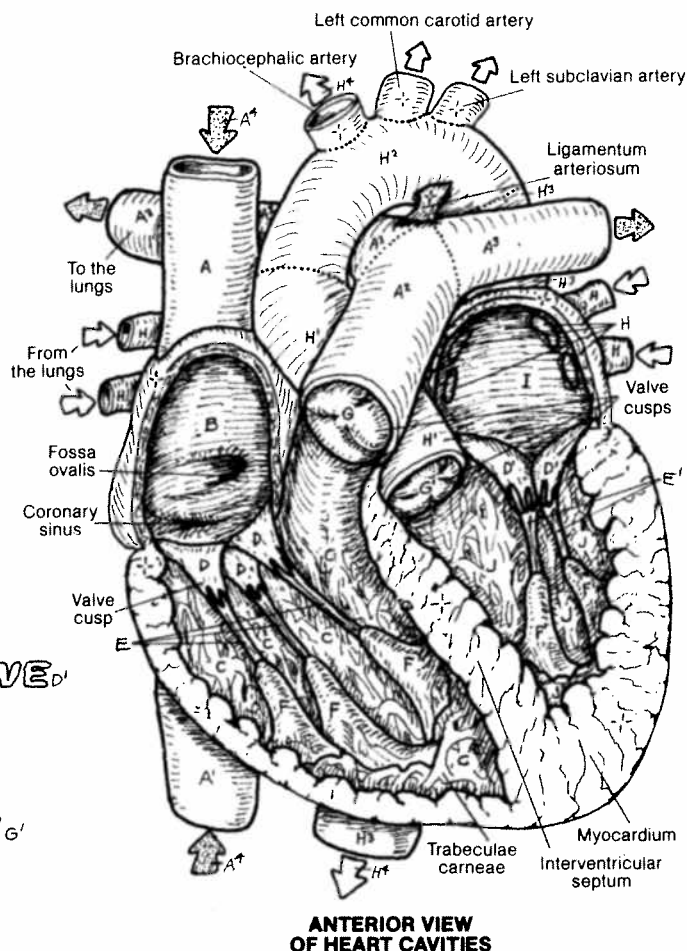
VI. CARDIOVASCULAR SYSTEM

CHAMBERS OF THE HEART

66
See 63

OK. Use blue for A, red for H, and your lightest colors for B, C, I, and J.
Begin with the four chambers of the heart, and follow the direction of blood flow as you color your way down the list of titles. Also color the directional arrows blue (dotted) and red; their titles are at lower right. (2) Color the circulation chart below, beginning with numeral one (1) in the right atrium. Color the arrows accordingly, along with the four numerals. Do not color the chambers or the vessels.

SUPERIOR VENA CAVA_A
INFERIOR VENA CAVA_{A'}
RIGHT ATRIUM_B
RIGHT VENTRICLE_C
A-V TRICUSPID VALVE_D
CHORDAE TENDINEAE_E
PAPILLARY MUSCLE_F
PULMONARY TRUNK_{A²}
PUL. SEMILUNAR VALVE_G
PUL. ARTERY_{A³}
PULMONARY VEIN_H
LEFT ATRIUM_I
LEFT VENTRICLE_J
A-V BICUSPID (MITRAL) VALVE_{D'}
CHORDAE TENDINEAE_{E'}
PAPILLARY MUSCLE_{F'}
ASCENDING AORTA_{H'}
AORTIC SEMILUNAR VALVE_{G'}
AORTIC ARCH_{H²}
THORACIC AORTA_{H³}



The heart is the muscular pump of the blood vascular system. It contains four cavities (chambers): two on the right side (pulmonary heart), two on the left (systemic heart). The pulmonary "heart" includes the right atrium and right ventricle. The thin-walled *right atrium* receives *deoxygenated blood* from the *superior* and the *inferior vena cava*, and from the *coronary sinus* (draining the heart vessels). The thin-walled *left atrium* receives *oxygenated blood* from *pulmonary veins*. Atrial blood is pumped at a pressure of about 5 mm Hg into the *right and left ventricles* simultaneously through the *atrioventricular orifices*, guarded by the 3-cusp *tricuspid valve* on the right and the 2-cusp *bicuspid valve* on the left. The cusps are like panels of a parachute, secured to the *papillary muscles* in the ventricles by tendinous *chordae tendineae*. These muscles contract with the ventricular muscles, tensing the cords, and resisting cusp over-flap as ventricular blood bulges into them during ventricular contraction (systole). The ventricles, significantly more muscular than their fellow atria, pump *deoxygenated blood* to the lungs via the *pulmonary trunk* at a pressure of about 25 mm Hg (right ventricle), and into the *ascending aorta* at a pressure of about 120 mm Hg (left ventricle) simultaneously. This pressure difference is reflected in the thicker walls of the left ventricle compared to the right. The pocket-like *pulmonary* and *aortic semilunar valves* guard the trunk and aorta, respectively. As blood falls back toward the ventricle from the trunk/aorta during the resting phase (diastole), these pockets fill, closing off their respective orifices, and preventing reflux into the ventricles.

CIRCULATION THROUGH THE HEART*

OXYGENATED BLOOD → H⁴
DEOXYGENATED BLOOD → A⁴

